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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

KEENAN, JAMES W

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| ART UNIT | PAPER NUMBER |
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3652

DATE MAILED: 08/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/844,843

Applicant(s)

PRUTEANU ET AL.

Examiner

James Keenan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 27-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-35 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: _____

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1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-26, drawn to a container handling system, classified in class 414, subclass 408.
 - II. Claims 27-31, drawn to a container handling system, classified in class 414, subclass 421.
 - III. Claims 32-35, drawn to a method of operating a container handling system, classified in class 414, subclass 810.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the actuator for reversibly rotating the mechanized arm arrangement is not limited to a rotary actuator. The subcombination has separate utility such as use with an mechanized arm without an extensible boom.

Inventions III and (I and II) are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to

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practice another and materially different process. (MPEP § 806.05(e)). In this case the process can be practiced by an apparatus without position sensing systems.

2. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

3. During a telephone conversation with Charles Mersereau on 8/14/02 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-26.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 27-35 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to non-elected inventions.

4. Although the above mentioned telephone conversation also included an election of species requirement, the examiner, upon examination of the application, has determined that no such election requirement is warranted.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any

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amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the system for sensing the boom extension and the control system (claims 1 and 14), the speed controller (claims 2 and 15-16), the linear transducer (claims 7 and 20), and the programmed microprocessor (claims 10, 12, 23, and 25) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

7. Claim 1 is objected to because of the following informalities: in line 9, "releasing lift and dump" is not understood. Appropriate correction is required.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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9. Claims 3, 7, 16, 17, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 3, 7, 17, and 20, "said lateral position sensing system" lacks antecedent basis.

Claim 16 does not further limit claim 15 from which it depends.

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 3, 9-10, 14, 17, and 22-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Brandt (US 5,851,100, cited by applicant).

Brandt shows a container handling system including extensible boom 24, mechanized arm arrangement 26 comprised of a single shaped arm member operated by a hydraulic cylinder, container grabber device 28, position sensing system 150 for sensing the boom extension, position sensing system 152 for sensing the arm rotation, actuators 66, 68, and 118-120 for extending/retracting the boom, rotating the arm arrangement, and operating the grabber device, respectively, and a programmed microprocessor control system for operating the container handling system.

Re claims 3 and 17, the sensors are potentiometers with rotating shafts. As best understood, such a structure is considered to be an "angular displacement transducer".

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12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 2-4 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of Duell et al (US 6,123,497).

Brandt does not disclose controlling the rotational speed of the arm based on the sensed arm position, although the ability to avoid slamming the container into the ground after the dump cycle is completed is disclosed, which ability is based on the sensed arm position.

Duell et al show an automated refuse vehicle wherein the rotational speed of the dumping arm 26 can be controlled according to several parameters, and at least to some extent is based on an arm position sensor AP₁ (potentiometer).

It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Brandt by controlling the rotational speed of the arm based on the arm position sensor, as suggested by Duell et al, as this would provide greater efficiency and flexibility when operating in the automatic dump cycle mode.

Re claims 3-4 and 17, the use of angular displacement transducers, if not inherent in Brandt as noted above in paragraph 11, is considered an obvious design expediency.

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14. Claims 11 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of Duell et al and Tordenmalm et al (US 4,896,582).

Duell et al disclose that the cylinder endpoints are “cushioned” so that the pistons are not banged into the cylinders at the end of travel. As best understood, this is a mechanical damping means. Thus, the apparatus of Brandt as modified by Duell et al would have a damping means but it would not be part of the control system.

Tordenmalm et al show a control system for damping a piston as it approaches its end position in a hydraulic cylinder, including sensing means and a braking system operating in response thereto.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have further modified the apparatus of Brandt by utilizing a control means for damping the piston as it approached its end of travel in the cylinder, as suggested by Tordenmalm et al, as this would simply be a well known expediency in the art for reducing shock and damage to the piston/cylinder assemblies.

15. Claims 3, 7, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of Anderson et al (US 6,152,673).

As noted above re claims 3 and 17, the rotary potentiometers of Brandt are believed to define angular displacement transducers, as noted above in paragraph 11. However, in the event this is shown to be inaccurate, the following rejection is utilized as an alternative.

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First, regarding claims 7 and 20, Brandt does not show the sensors to be linear transducers.

Anderson et al show an automated fork positioning system with a control system including linear displacement transducers 104, 108, as well as alternative rotary positioning sensors 200, 201 (potentiometers), to sense fork and arm positions, respectively.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Brandt by utilizing linear transducers rather than rotary potentiometers to sense the arm and fork positions, as Anderson et al explicitly teach that this is an alternate equivalent expediency in the same environment.

Re claims 3 and 17, in the event that rotary potentiometers are not considered angular displacement transducers, the substitution thereof is considered an obvious design expediency, in view of Anderson et al's teaching that either linear or rotary type sensing devices may be utilized.

16. Claims 5, 8, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of Sizemore et al (US 5,505,576).

Brandt shows the arm actuator to be a hydraulic cylinder rather than a hydraulic rotary actuator.

Sizemore et al show a side loading refuse collection vehicle which utilizes rotary actuator 49 to rotate arm 18.

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It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Brandt by substituting the arm hydraulic cylinder thereof with a rotary actuator, as Sizemore et al show that this would be an alternate equivalent expediency in the same environment.

Re claims 8 and 21, the use of a pair of parallel arms rather than a single solid arm is considered an obvious design choice.

17. Claims 6, 12, 19, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of Duell et al, as applied to claims 2, 4, 15, and 16 above, and further in view of Sizemore et al.

To have further modified the apparatus of Brandt and Duell et al by substituting a rotary actuator for the cylinder, as suggested by Sizemore et al, would have been obvious for the same reason set forth in the immediately preceding paragraph.

18. Claims 13 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of Duell et al and Sizemore et al, as applied to claims 12 and 25 above, and further in view of Tordenmalm et al.

To have yet further modified the apparatus of Brandt by adding controlled damping means, as suggested by Tordenmalm et al, would have been obvious for the same reason set forth in paragraph 14 above.

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19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

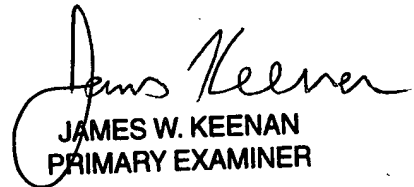
20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Keenan whose telephone number is (703) 308-2559.

The fax phone number for the organization where this application or proceeding is assigned is 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1113.

jwk

August 14, 2002


JAMES W. KEENAN
PRIMARY EXAMINER